ED 052 172 **AN EXPERIMENTAL INVESTIGATION OF THE EFFECT OF "PREVIEWS" AND "REVIEWS" ON RETENTION OF ORALLY PRESENTED INFORMATION.**

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ABSTRACT

The purpose of this study was to test experimentally the efficacy of the ancient advice that speakers should use previews and reviews. Each of four groups was presented a version of an audio-taped speech on listening. The speech was identical for each group in all respects but one: group 1 heard the speech with preview only; group 2, preview and review; group 3, review only; and group 4, neither. Analysis of scores on a post-test of comprehension indicated no significant differences between any of the four groups. (Author)

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AN EXPERIMENTAL INVESTIGATION OF THE EFFECT OF "PREVIEWS" AND "REVIEWS" ON RETENTION OF ORALLY PRESENTED INFORMATION

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To test experimentally the efficacy of the advice that speakers should "preview" in the introduction and "review" in the conclusion the main ideas in the body of their speeches, each of four groups was presented a version of an audio-taped speech on listening, identical for each group in all respects but one: group 1 heard the speech with preview only; group 2, preview and review; group 3, review only; and group 4, neither preview nor review. Analysis of scores on a multiple-choice test of speech content revealed no significant differences between any of the groups.

Public speakers have long been told to "preview" in the introduction and to "review" in the conclusion the main ideas in the body of their speeches. Roots of the advice can be found in ancient rhetorical works;[1] statements of it, in explicit and implicit form, can be found in many modern texts.[2]

Mr. Vickrey (M.A., Auburn University, 1965) is a University Fellow and doctoral student in Rhetoric and Public Address at the Florida State University. *The study was conducted in a seminar taught by Robert J. Kibler, Professor of Speech at F.S.U. This paper was presented at the 1970 Convention of the Speech Communication Association held in New Orleans, La.*

[1]For example, see Lane Cooper, *The Rhetoric of Aristotle* (NY: Appleton-Century-Crofts, 1932), p. 241.

[2]Typical examples are A. Craig Baird and Franklin H. Knower, *General Speech: Introduction* (NY: McGraw-Hill, 1963), pp. 72, 80 and 235-255; and John F. Wilson and Carroll C. Arnold, *Public Speaking as a Liberal Art*, 2nd ed. (Boston: Allyn and Bacon, 1968), pp. 220, 223-224.

The most explicit recent restatement of the rule was found, not in a text, but in an article by Phillip K. Tompkins, "Organizing the Speech to Inform," *Today's Speech* 7 (September, 1959), 21-22: "conclude your introduction with a clear statement of your central idea; restate your central idea and enumerate all your main sub-points in the order you mean to discuss

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Experimental support for this oft-repeated advice is not overwhelming, however. Only one *experimental* study utilizing an *orally* presented expository message has been reported. Turner found that the addition of previews and reviews to expository discourse did not significantly increase audience comprehension.[3] Because of the number and nature of the variables inherent in the study, he concluded that the "number and placement of speech summaries necessary for optimum audience comprehension is [still] a topic for further research . . . ."[4] Few would disagree with Turner that more empirical evidence is required before we discard rhetorical advice over 2000 years old.

When we turn to related studies, we scarcely find such evidence, however. Only four other studies in this area of rhetorical theory have been found in the literature. Of the four, only three are *experimental* in nature—and only two of the three deal with *orally* presented messages. Thistlethwaite, de Haan and Kamenetzky found that comprehension of the intended conclusion of a persuasive message increased when the conclusion was explicit, the message was presented in a "clearly defined organizational context" (*i.e.*, when a preview and liberal internal transitions were used, but when no review was used), and when the audience was intellectually superior.[5] Parker found that in *written* communication, concluding summaries were use-

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them; discuss each sub-point in detail; use clear (even obvious) transitions from one point to the next to let your listeners know where you have been and where you are going; wind up your speech by simply restating or repeating your central idea and summarizing the sub-points of the speech."

[3]Frederik H. Turner, Jr., "The Effects of Speech Summaries on Audience Comprehension," *CSSJ* 21 (Spring, 1970), 24-29. Turner's study was reported *after* the present one had been submitted for publication, thereby requiring extensive revision of the introductory and concluding sections of the original draft of this paper.

[4]Turner, p. 29.

[5]Donald L. Thistlethwaite, Henry de Haan and Joseph Kamenetzky, "The Effects of 'Directive' and 'Non-Directive' Communication Procedures on Attitudes," *Journal of Abnormal and Social Psychology* 51 (1955), 107-113. Since we do not access to the speeches actually used in the investigation (a problem not uncommon in the reporting of such studies), as well as in the others noted below, it is difficult to evaluate precisely the nature of the organizational devices used.

See also Stewart L. Tubbs, "Explicit versus Implicit Conclusions and Audience Commitment," *Speech Monographs* 35 (March, 1968), 14-19.

ful for immediate recall but that beginning summaries do not enhance comprehension except for high and middle ability readers.[6] Thompson concluded that an initial summary and internal transitions "can enhance comprehension" significantly.[7] Tompkins found through "casual experimentation" that speeches with previews and reviews and clear internal transitions increased comprehension when its measure was similarity between the speaker's outline and one made by the audience.[8]

Examination of these studies indicates the lack of certainty in our knowledge of the relationship between preview and review devices[9] and retention of orally presented information. Although Turner's study was an *experimental* examination of this problem, Thistlethwaite, de Haan and Kamenetzky, as well as Thompson, dealt only with the preview; Parker, with both but in written form; and, as noted, Tompkins dealt with both but in an uncontrolled environment. More research appears needed, therefore, lest we continue to accept uncritically ancient advice that may not have solid empirical support--or lest we reject it on the basis of *one* study. The purpose of this investigation then was to examine experimentally the relationship between previews and reviews and retention of orally presented information.

Rationale

In his summary of studies on the relationship of organization and learning, Petrie concluded that organization facilitates learn-

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[6]John Parker, "Some Organizational Variables and Their Effect Upon Comprehension," *Journal of Communication* 12 (March, 1962), 27-32.

[7]Ernest Thompson, "Some Effects of Message Structure on Listener's Comprehension," *Speech Monographs* 34 (March, 1967), 51-56.

[8]Tompkins, p. 21. The dependent variable in this investigation was replication of the speaker's outline.

[9]Writers do not yet agree on organizational terminology. Some write of "initial summary," "partition," "preview" (among others) when referring to an introductory listing of points to be covered in the body of a speech. When referring to a listing in review of points covered earlier in a speech, they use "concluding summary," "summary" or simply "review." In this paper, as the reader may have already noticed, preview and review are used.

ing,[10] a statement supported by numerous researchers, including Katona who contended that organization "must be present in some form in all kinds of learning."[11] Though many writers agree that organization is necessary to learning, many more differ concerning *how* and *why* organization operates in the learning process. The earliest studies on the effect of organization of materials on retention of information dealt with brief or disconnected materials.[12] Later studies dealt with speech-length materials, results of which both Beighley and Petrie summarized.[13] Examination of these and the other studies noted below suggests the following conclusions concerning the relationship between retention of orally presented information[14] and use of preview/review devices—conclusions that provide a theoretical schema for the hypotheses tested in this study.

[10]Charles Petrie, "Listening and Organization," *Central States Speech Journal* 15 (February, 1964), 6-12.

See also Petrie's helpful paper on organization: "Informative Speaking: A Summary and Bibliography of Related Research," *Speech Monographs* 30 (June, 1963), 79-91.

It should be pointed out that some studies have concluded that organization may not be as important as Petrie and others maintain. For example, see K. C. Beighley, "An Experimental Study of the Effect of Three Speech Variables on Listener Comprehension," *Speech Monographs* 21 (November, 1954), 248-254.

[11]George Katona, *Organizing and Memorizing: Studies in the Psychology of Learning and Teaching* (NY: Columbia University Press, 1940), p. 249. Such statements should be read with care because of the ambiguous way "organization" is sometimes used by psychologists.

[12]K.C. Beighley summarized some of them in "A Summary of Experimental Studies Dealing with the Effect of Organization and Skill of Speaker on Comprehension," *Journal of Communication* 2 (1952), 58-65.

[13]Beighley, "A Summary," and Petrie, "Informative Speaking."

[14]Few studies have been made on the "informative" speech; most have concerned the "persuasive" type. Nevertheless, results of studies of both types have been used here to reach the stated conclusions, for, at least to some extent, comprehension appears to be related to attitude change.

Although the distinction between "informative" and "persuasive" speaking is not always clear and although a strong case can be made for the proposition that all human communication is basically "persuasive," I think that the distinction has merit. Therefore, in this paper, I have accepted the "audience-centered" definition set forth by Thomas Olbricht in *Informative Speaking* (Glenview, Ill.: Scott, Foresman, 1968), p. 23: informative discourse is that which an audience is "predisposed to accept without argument."

1. Both a "recency" and a "primacy" effect appears operative in the human learning process. Various investigators have examined their operation.[15] Tannenbaum found that recall of items in a radio newscast was significantly greater for those at the end.[16] Ehrensberger also found that items near the end of a communication were more easily retained.[17] Jersild, however, reported that the primacy effect was the stronger.[18] Although other related investigations have been conducted,[19] no one can yet say with certainty whether recency or primacy is the more effective variable—although primacy appears to have the edge at the moment. Nevertheless, we could reasonably expect that a speech with *both* a preview and a review would maximize the influence of whatever recency and primacy effects exist, thus producing greater retention of information that a speech with either alone—or neither. The relative effectiveness of one over the other, however, cannot be predicted, given the somewhat contradictory conclusions of previous research.

2. Jersild and Ehrensberger also found that repetition affects information retention. Both reported that *three repetitions* of an idea *distributed* through a message increased significantly listener retention of that idea. They also found that more than three such repetitions did not significantly increase it and that less than three decreased it. Thus, we could expect that a speech with a preview and review (and otherwise also well organized) would increase comprehension (when defined as retention) of major ideas because such a speech necessarily would have those ideas distributed in three places in it. However, as before, this would not permit us to predict which device alone would be more effective.

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[15]See James Deese, *The Psychology of Learning*, 2nd ed. (NY: McGraw-Hill, 1958), pp 172ff for a useful discusion of them.

[16]P. H. Tannenbaum, "Effect of Serial Position on Recall of Radio News Stories," *Journalism Quarterly* 31 (1954), 319-323.

[17]R. Ehrensberger, "An Experimental Study of the Relative Effectiveness of Certain Forms of Emphasis in Public Speaking," *Speech Monographs* 12 (N. 2, 1945), 94-111.

[18]Arthur Jersild, "Modes of Emphasis in Public Speaking," *Journal of Applied Psychology* 12 (N. 6, 1928), 611-620.

[19]Carl I. Hovland *et al.*, *The Order of Presentation in Persuasion* (New Haven: Yale University Press, 1957).

3. We could also reasonably expect that a preview would arouse interest and thus facilitate learning by creating a 'set" in the mind of the listener (i.e., a tendency to expect certain ideas from the speaker and thus to look *actively* for them in the subsequent message).[20] When the listener finds what he has been told to expect, he would be "rewarded," thereby possibly reinforcing behavior related to information retention. Although such a theory does not account for the efficacy of a *review,* perhaps, we could postulate that a review gives the listener a way of checking to determine if his initial expectations have been fulfilled—a process that might also reinforce learning-related behavior.

In summary then, we can say that the present state of learning theory and previous studies provide some support for the expectation that use of a preview/review would increase information retention.

Research Hypotheses

To test the relationship generated by the foregoing rationale, the following research hypotheses were formulated: (1) Inclusion of *both* a preview and a review of the main ideas in the body of an organized, informative speech should significantly increase retention of information by listeners. (2) Inclusion of *either* a preview or a review of the main ideas in the body of an organized, informative speech should not significantly increase retention of information by listeners. (3) There should be no significant differences in amount of information retained by listeners of an organized, informative speech that contains either a preview or a review or *neither.*

Procedures

Design and Selection of Subjects

The design for the investigation was the "post-test-only,

[20]See Hovland, p. 57 and Petrie, "A Summary," p. 64.

A provocative theoretical construct related to the notion of "set" in found in David P. Ausubel, *The Psychology of Meaningful Verbal Learnings An Introduction to School Learning* (NY: Grune and Stratton, 1963). Ausubel described the "advance organizer," an elaborate ideational content "set" that allegedly facilitates learning. See pp. 83ff and 214ff.

control group" one outlined by Campbell and Stanley.[21] It consisted of the presentation of a version of a speech to each of four groups of subjects (N=85) from undergraduate speech classes at Florida State University. Group 1 contained 10 men and 10 women; group 2, 16 men, 10 women; group 3, 7 men, 8 women; and group 4, 14 men, 10 women. Groups 1, 2, and 4 were sections of the basic speaking class; group 3 was created by random assignment of students from several undergraduate speech classes. Age distributions for each group were similar.

Construction and Assessment of Variables

Independent Variable. The independent variable was the introductory and concluding summary of the main ideas in the body of a 13 minute speech on listening.[22] The introductory summary (preview) was a statement at the end of the speech introduction summarizing the main ideas of the speech. It took this form: "We want to consider today the answers to three important questions. The first question is Why Study Listening? I will try to show you that listening is learned and improved through training; that wide differences in listening ability exist; and that listening doesn't usually develop adequately without training. The second question is . . . ." The concluding summary (review) was a statement near the end of the speech conclusion summarizing the major ideas covered in the speech body: "We have talked about three questions. The first one was Why Study Listening? I tried to show you . . . ." The preview and review each constituted about 9 per cent of the total message of 1,625 words.[23]

Four audio-taped versions of the speech were made,[24] each

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[21]Donald T. Campbell and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," N.L. Gage, ed., *Handbook of Research on Teaching* (Chicago: Rand McNally, 1963), pp. 195-197.

[22]The speech, adapted somewhat for this study, was the one developed and used by Robert J. Kibler and Larry L. Barker. It may be obtained upon written request to the author of this paper.

[23]The independent variable is described in detail to enable the reader to understand more precisely the type of preview/review used. Neither Turner nor most of the other researchers cited above include such information, thereby making interpretation of their findings difficult.

[24]An experienced male, graduate student made an audio-tape of the speech on listening. I made the three other versions of it by omitting,

different from the others only in level of treatment. Stimulus *A* was a 13 minute speech with both preview and review. Stimulus *B* was the same speech, but with preview only. Stimulus *C* contained only the review. Stimulus *D* had neither. Although the speeches as taped varied in length, for the purposes of this study it was assumed that that variability was not crucial.[25]

Stimulus *A* (preview and review) in written form was presented to a group of 4 faculty and 7 graduate students in the Department of Communication at Florida State University. Each rated the speech either "very adequately organized" or "adequately organized" on a four-point scale. Using a similar scale, each also concluded that the preview and review either "very adequately" or "adequately" provided a summary of the main ideas in the speech.

To determine whether the speech actually communicates *new* information, a pilot study was conducted. Stimulus *A* was presented orally to a section of a basic speech class (N=23) at Florida State University, after which a multiple-choice test of comprehension was administered. Another class (N=21) received the post-test only. An analysis of variance for one-way design indicated that the speech did communicate (at the .01 level) new information to a group similar to the ones used in the study.

Dependent Variable. The dependent variable was the score

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during the reproduction process, from copies of the original tape either the preview or review—or both. Thus, although each version of the speech was exactly alike in terms of delivery, three do differ in length from the original.

[25]To equate each speech in length would require (1) adding filler material to some, thereby possibly creating "noise" or (2) varying the speaking rate, which would add a delivery variable that might affect comprehension (although recent literature suggests that differences in rate, within a certain range, are not significant). Nonetheless, I elected to keep delivery constant and to vary length slightly. (It should be pointed out that Turner did not discuss this vexing problem.)

Another variable not dealt with in this investigation was listener level of ability in organization. Turner also ignored it. The reader should be aware, however, that at least one researcher has concluded that the variable is an effective one. See Ernest Thompson, "An Experimental Investigation of the Relative Effectiveness of Organizational Structure in Oral Communication," *Southern Speech Journal* 26 (Fall, 1960), 61.

of subjects on a 31 item multiple-choice test of comprehension (here defined as "retention" of information presented).

The reliability of the post-test was assessed both in the pilot study and in the major study by means of the Kuder-Richardson Formula 20. It was found to be .76 for the test used in the pilot study and .55 for the revised test used in the major study (an unusually low score for one group caused the drop).

Validity of the instrument was also determined in the pilot study by comparing results from the two pilot groups. A preliminary check of "content" validity was also done then. In addition, the judges who rated Stimulus *A* on organization were also asked to assess the representativeness of the test items. They all responded on a four-point scale that the items were either "very representative or "representative."

Results and Discussion

Post-test scores for each treatment group are summarized in Table 1. An analysis of variance for one-way design was performed on this data. The F ratio obtained, reported in Table 2,

Table 1
Comparison of Test Scores for The Treatment Groups

Treatment and Group	A2 (N=26) Preview/ Review	B1 (N=20) Review	C3 (N=15) Preview	D4 (N=24) Neither
Mean	22.962	22.350	21.933	22.625
SD	3.605	2434	3262	3.173

Table 2
Analysis of Variance of Test Scores

	Sum of Squares	DF	Mean Square	F
Between Groups	11.0360	3	3.6787	.364
Within Groups	818.0699	81	10.0996	
Total	829.1059	84		

was *non*-significant. Therefore, hypothesis 1 was not supported. Under the conditions of this investigation, *inclusion of both a preview and a review of the main ideas in the body of an organized, informative speech did not significantly increase retention of information by listeners.* However, hypotheses 2 and 3 are accepted; differences obtained from use of either device alone or neither were not significant.

Given the rationale outlined above and the age of the advice under investigation, how can we account for the failure of this study to confirm the efficacy of the prescription that speakers should use previews and reviews? An obvious first answer is that no relationship exists between use of the devices and retention of information and, therefore, this "replication" merely confirms the results reported by Turner. Until further research gives us more data, we would probably be wise to avoid, at this time, so broad and categorical an answer. This study (and Turner's) only investigated one type of preview/review and under special conditions. For the time being, the most that we can claim is that an informative speech with an extensive preview and review of the type used here will not significantly increase scores on a multiple-choice test of comprehension.

Although other answers could be suggested to explain the results obtained (*e.g.,* the notion that students conditioned to multiple-choice testing could do well even under poor learning conditions), perhaps the most important one is that the *type* of test used in this study (and in Turner's) precluded any other result. Subjects were not required to "recall" 'the main points; they merely had to "recognize" them. It is possible then that the results would have been different if (1) subjects had been asked to complete an outline of the speech (similar to the one Tompkins used) and to recall in other ways the specific points covered in it, or (2) more multiple-choice items had dealt directly with main ideas as such, rather than with the details of supporting materials. Further research in this area should be based on a careful consideration of the *kind* of "comprehension" being measured—and *why* it is the most appropriate. The question is really whether we should expect audiences to be able to recall major points or simply to recognize them along with content details—or both. That question has rarely been adequately handled in the literature. Although Turner utilized both "in-

terpretation" and "extrapolation" items, his post-test apparently had the same inherent weakness as the one used here.

Regardless of how we try to rationalize the results of both this study and Turner's, we should probably remember that the public speaker presumably may employ previews and reviews for *various* purposes. If his purpose were simply to increase audience retention of expository supporting materials (as measured by a multiple-choice post-test), the two studies suggest that he probably need not bother. However, if his purpose were to increase retention of main points, other studies (such as those of Thompson and Ehrensberger) suggest otherwise. In addition, it should be noted that experimental evidence exists to support the expectation of the speaker who thinks that use of the devices may increase his "ethos."[26] Only further research can provide more definite answers to the problem of when and how to use previews and reviews.

Summary

The purpose of this study was to test experimentally the efficacy of the ancient advice that speakers should use previews and reviews. Each of four groups was presented a version of an audio-taped speech on listening. The speech was identical for each group in all respects but one: group 1 heard the speech with preview only; group 2, preview and review; group 3, review only; and group 4, neither. Analysis of scores on a post-test of comprehension indicated no significant differences between any of the four groups.

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[26]See Harry Sharp, Jr. and Thomas McClung, "Effects of Organization on the Speaker's *Ethos*," *Speech Monographs* 33 (June, 1966), 182-183, and James C. McCroskey and R. Samuel Mehrley, "The Effects of Disorganization and Nonfluency on Attitude Charge and Source Credibility," *Speech Monographs* 36 (March, 1969), 1321.